What Is Claimed Is:

1. A method to decrease localized inflammatory responses in a tissue of a patient comprising administering to said patient heparinase enzyme in an effective amount sufficient to decrease said localized inflammatory response.

2. The method of claim 1, wherein said administration of said heparinase enzyme removes and digests heparin and heparan sulfate from endothelial cell surfaces and extracellular matrices of said tissue.

3. The method of claim 1, wherein said administration of said heparinase enzyme decreases the accumulation of leukocytes in tissue adjacent to endothelial cell surfaces and extracellular matrices.

4. The method of claim 1, wherein said administration of said heparinase enzyme inhibits leukocyte extravasation by releasing immobilized chemokines and destroying chemokines immobilized to endothelium.

5. The method of claim 1, wherein said administration of said heparinase enzyme inhibits leukocyte rolling on endothelium.

6. The method of claim 1, wherein said heparinase enzyme is overexpressed from a recombinant nucleotide sequence, in *Flavobacterium heparinum*.

7. The method of claim 1, wherein said heparinase enzyme is expressed from a recombinant nucleotide sequence in an organism in which it does not naturally occur.

8. A method to decrease a localized inflammatory response in a tissue of a patient comprising administering to said patient a fusion protein comprising a ligand which binds to activated endothelial cells and a heparinase enzyme in an amount sufficient to decrease said localized inflammatory response in said tissue.

9. The method of claim 8, wherein said fusion protein is made by genetic engineering techniques.

10. A pharmaceutical composition comprising a heparinase enzyme together with a pharmaceutically or a veterinarilly acceptable carrier.

11. A pharmaceutical composition comprising fusion molecule comprising a ligand which binds to activated endothelium and a heparinase enzyme.

12. The pharmaceutical composition of claim 11, wherein said ligand binding domain is selected from the group consisting of cytokines, antibodies, integrins, and selectins.

13. The pharmaceutical composition of claim 11, wherein said ligand binding domain are fragments of said cytokines, antibodies, integrins, and selectins.

14. The pharmaceutical composition of claim 11, wherein said fragments are selected from the group consisting of cytokine receptor binding domains, Fab fragments, antibody variable regions, integrin I-domains, and selectin domains.

15. The pharmaceutical composition of either claims 10 or 11, wherein said carrier is selected from the group consisting of liposomes, lipospheres, proteosomes, microspheres, microcapsules, and biodegradable polymeric matrices.

16. The use of a heparinase enzyme in the preparation of a medicant for treatment of decreasing localized inflammatory responses in a patient's tissue.

17. The use of a heparinase enzyme in the preparation of a medicant comprising a fusion protein comprising a ligand which binds to activated endothelial cells and a heparinase enzyme for the treatment of decreasing localized inflammatory responses in a patient's tissue.